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TITLE: A Randomized Placebo-Controlled Trial of Citalopram for Anxiety Disorders Following Traumatic Brain Injury

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14. ABSTRACT:
The overarching goal of this project is to study the effects of a serotonin reuptake inhibitor (SRI), citalopram, for the treatment of anxiety experienced by individuals after traumatic brain injury (TBI). Specifically, this project seeks to treat individuals who meet criteria for DSM-IV diagnosis of Anxiety Disorder Due to a General Medical Condition, within 3 to 24 months of TBI. A randomized placebo controlled design with 1-year follow-up will be utilized to evaluate the effectiveness of citalopram in alleviating significant anxiety symptoms that cause significant distress and can lead to medical retirement of active duty soldiers.

15. SUBJECT TERMS
Traumatic Brain Injury; Anxiety Disorders; SRI Treatment; Randomized Controlled Trial

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Introduction:

The overarching goal of this project is to determine the effectiveness of citalopram for the treatment of anxiety disorders following Traumatic Brain Injury (TBI) and to examine possible longer term effectiveness of treatment with citalopram on symptom reporting and return to work/duty.

Body:

Participants who experienced a TBI 3 to 24 months ago and are experiencing anxiety are eligible for the study. If they agree to participate, they sign informed consent prior to research testing. An informational script about the study is read to individuals. After the script is read, the individual is given the informed consent to review. Patients are ineligible to participate in the study until they reach a Rancho Los Amigos level of 7 or 8. If there is any question as to a patient's capacity to consent, the neuropsychologist and/or psychiatrist involved in the study assesses the subject's level of comprehension prior to consent. Any confusional state prohibits a subject from being rated as a 7 or 8. After signing the informed consent, tests and scales are administered and patients are randomized to receive a 12-week course of citalopram or placebo. Female participants of childbearing potential are given a serum pregnancy test prior to randomization. If the test is positive, she is ineligible for participation in the study.

Eligible, consented participants receive an increasing dose of citalopram, up to 40 mg, or placebo, up to 4 pills. A blood sample drawn after completion of the 12-week treatment period is used to obtain citalopram levels as a measure of medication compliance. A two-week taper follows the treatment period. Study participants receive comprehensive multidisciplinary evaluations at a DVBIC site, including neuropsychological and psychiatric interviews and evaluations at baseline, 12 weeks and 12 months.

Since the last annual report, there have been three modifications to the protocol which have been submitted for approval. Participating sites have been seeing patients injured more acutely than originally thought, therefore a change to expand the time from injury range in the inclusion criteria from 6 to 24 months to 3 to 24 months was submitted. The other two modifications included a payment of $50 to subjects for the blood draw at the Week 12 evaluation, and the addition of a Letter of Appreciation to be given to all subjects who complete the active phase of the protocol. The modifications have been approved at the Richmond VA and Walter Reed Army Medical Center and are currently being reviewed at the IRBs at National Naval Medical Center San Diego and Wilford Hall Medical Center.

In evaluating both the enrollment numbers and site screening logs, it was decided that three of our VA sites do not have the appropriate patient population to implement this protocol successfully. Our VA sites in Palo Alto, Minneapolis, and Tampa are therefore no longer participating in the protocol, other than completing protocol specific follow-up evaluations on previously enrolled subjects.

The number of subjects enrolled (or specimens used) in the study since last APR in the multi-center study is 4. The total number of subjects enrolled over the entire study length is 19.

Key Research Accomplishments:

- Data has been completely entered or is in the process of being entered into electronic data capture system for 19 patients. Data continues to be monitored and quality controlled.
- Enrolled 4 new subjects in the study (2 – Walter Reed Army Medical Center, 1 – Richmond VA, 1 – Wilford Hall Medical Center).
- Continued assessment of protocol inclusion criteria and procedures in order to implement the study successfully, and appropriately represent the patient population being seen at military hospitals.

Reportable Outcomes:

There have been no presentations or manuscripts completed in the past year in relation to this study.

Conclusion:

Despite challenges in patient accrual, we had been optimistic that we could enroll the remaining subjects within the next year. We are now, however, reappraising the viability of conducting this study during wartime.

No research conclusions can be made at this time. An interim analysis will be completed once half the subjects have been enrolled.

References:

Not Applicable